

Weekly SARS-CoV-2 Sequencing Summary for the State of Maine

October 29th, 2021

SUMMARY

Critical updates

- 9477 genomes sampled between March 10, 2020 and October 18, 2021 are included in the analysis
- 1189 B.1.1.7-like (alpha) Variant being monitored have been identified
- 8 B.1.351 (beta) Variant being monitored have been identified
- 3679 B.1.617.2/AY.* (delta) Variant of Concern have been identified
- 167 P.1-like (gamma) Variant being monitored have been identified

Notable Updates

- None

IMPORTANCE

- Variants of Concern have increased transmission
- Variants of Concern have increased severity of disease based on hospitalization and case fatality rates
- Variants of Concern have decreased susceptibility to therapeutic agents such as monoclonal antibodies
- Variants of Concern could evade natural or vaccine-induced immunity

CAVEATS and CONCERNS

- County information is missing in this analysis for ~50% of samples sequenced externally (e.g. CDC).
- 547 samples do not contain metadata preventing upload to national databases and inclusion in monthly and weekly counts.
- Weekly biases exist due to uneven sampling across the state
- Need to reduce location bias by sequencing more samples from varying facilities and laboratories
- Turnaround times need to decrease to inform infection control practices
- Phylogenetic tree has no county metadata. Public release of county or aggregated-county metadata will aid regional analysis

REFERENCES

- <https://nextstrain.org/community/tewhey-lab/ncov-ME/latest>
- <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-surveillance/variant-info.html>
- <https://covariants.org/>
- <https://outbreak.info/situation-reports>
- <https://nextstrain.org/>
- <https://github.com/tewhey-lab/ncov-ME>

Pangolin Lineage	WHO Label	CDC Category	Cumulative Count	July 2021	Aug 2021	Sept 2021	Oct 2021
B.1.617.2 / AY.*	Delta	VOC	3679	89.1%	97.0%	99.5%	99.7%
B.1.1.7 / Q.*	Alpha	VBM	1189	1.4%	0.6%	0.0%	0.0%
B.1.351	Beta	VBM	8	0.0%	0.0%	0.0%	0.0%
P.1*	Gamma	VBM	167	1.0%	0.7%	0.1%	0.0%
B.1.427 / B.1.429	Epsilon	VBM	152	0.0%	0.0%	0.0%	0.0%
P.2	Zeta	VBM	112	0.0%	0.0%	0.0%	0.0%
B.1.525	Eta	VBM	8	0.0%	0.0%	0.0%	0.0%
B.1.526	Iota	VBM	1013	2.0%	0.9%	0.0%	0.0%
B.1.621.*	Mu	VBM	104	4.0%	0.3%	0.0%	0.0%
C.37.*	Lambda		3	0.0%	0.0%	0.0%	0.0%
Total VOI/VOC Sequenced			6435	493	1482	967	390
Total Cases Sequenced			9477	506	1489	971	391

Table 1: Proportion of cases classified as a variant of concern (VOC), interest (VOI) or variants being monitored (VBM) by month. Lineages with “*” include the parent lineage and all sublineages (e.g. P.1* include P.1, P.1.10, P.1.12)

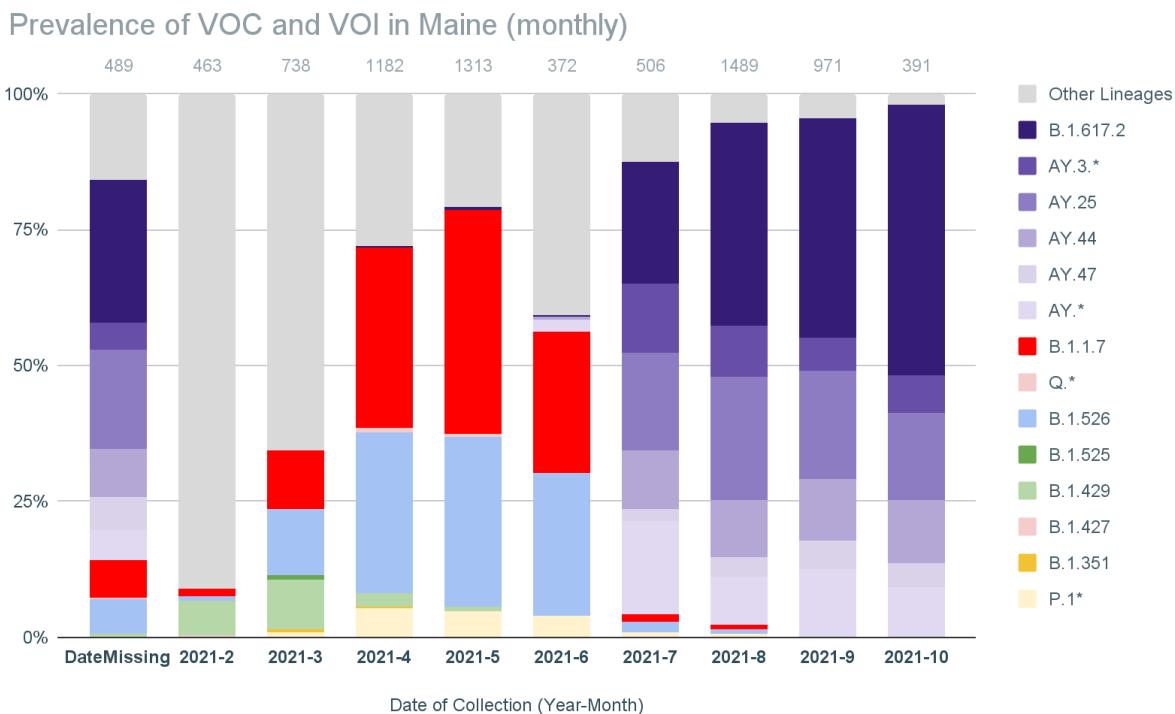


Figure 1: Proportion of samples typed as VOC/VOI/VBM by month. Samples represented as “DateMissing” include samples sequenced in the past 60 days without metadata.

Lineages with “*” include the parent lineage and all sublineages (e.g. P.1* include P.1, P.1.10, P.1.12)

AY.* does not include AY.3.*, AY.25, AY.26, and AY.39 which are provided separately.

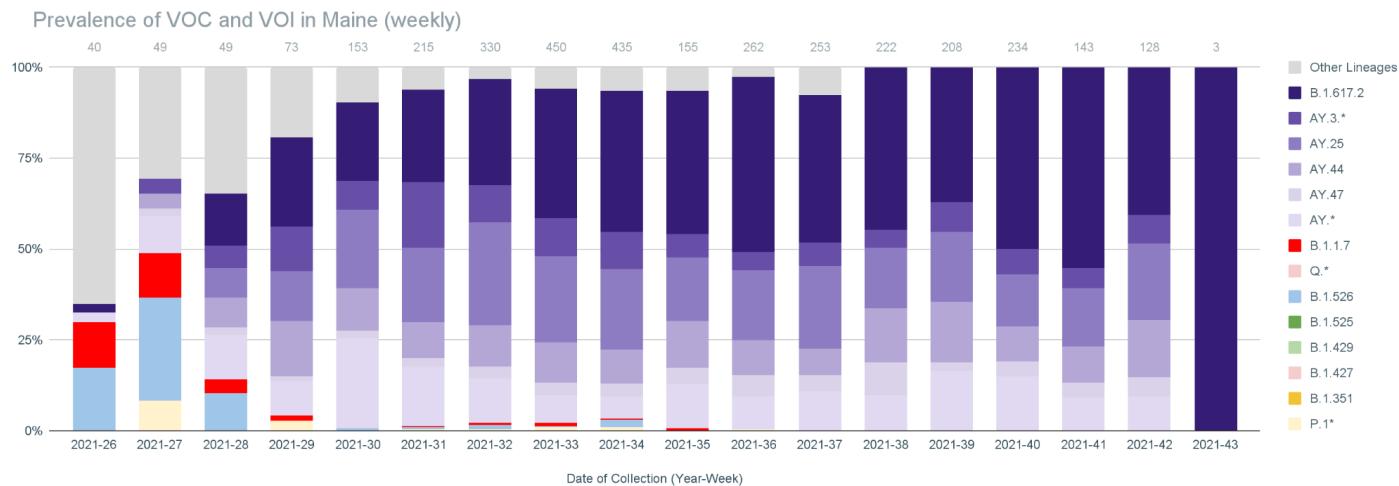


Figure 2: Proportion of samples typed as VOC and VOI by week.

Lineages with “*” include the parent lineage and all sublineages (e.g. P.1* include P.1, P.1.10, P.1.12)

AY.* does not include AY.3.*, AY.25, AY.26, and AY.39 which are provided separately.

Mutation	Gene	Category	Cumulative Count	July 2021	Aug 2021	Sept 2021	Oct 2021
S:E484K	Spike	Substitution	675	5.3%	1.0%	0.0%	0.0%
S:L452R	Spike	Substitution	4249	89.9%	93.3%	93.0%	100.0%

Table 2: Proportion of cases sequenced with substitutions of therapeutic concern

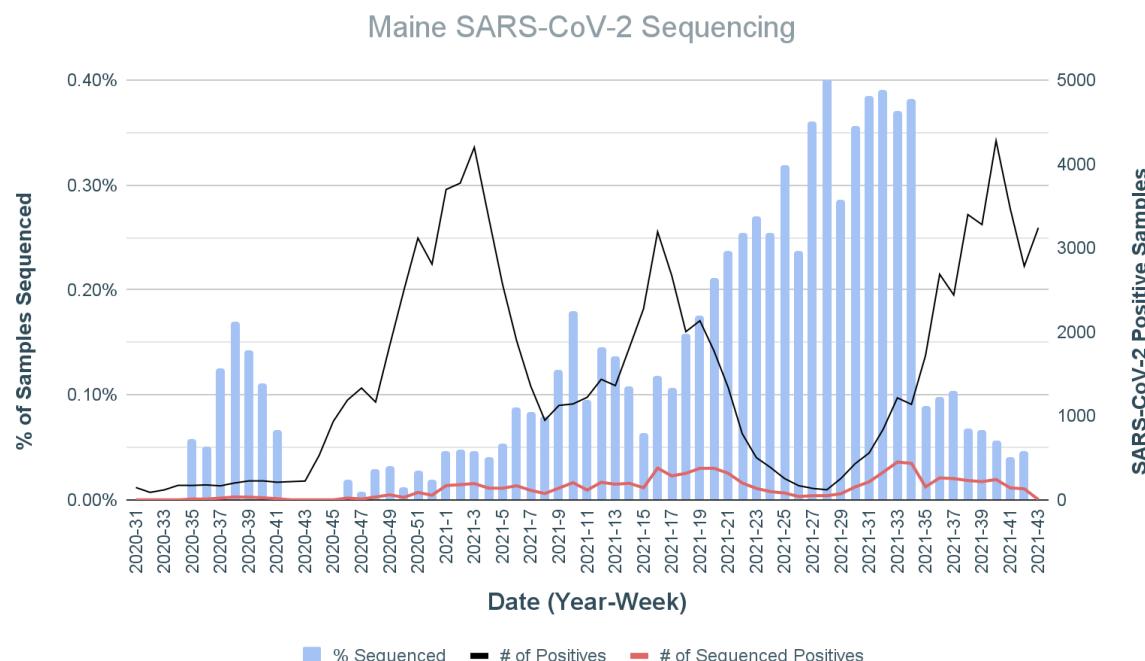


Figure 3: Proportion of COVID-19 positive samples sequenced.

Sample Collection Date	JAX	HETL	CDC	Other
Missing Date	547	0	0	0
Pre-Sept 2020	119	0	0	8
Sept 2020	116	0	0	0
Oct 2020	19	0	0	0
Nov 2020	98	0	0	0
Dec 2020	308	0	12	2
Jan 2021	604	0	89	20
Feb 2021	347	13	125	11
Mar 2021	546	16	222	19
Apr 2021	734	83	359	17
May 2021	940	59	305	10
June 2021	291	0	75	6
July 2021	454	0	50	2
Aug 2021	1307	0	160	22
Sep 2021	522	0	400	49
Oct 2021	278	0	96	17

Table 3: Total number of samples sequenced. Only Sequences passing quality metrics are included. CDC totals include samples from federal contracts (LabCorp, Helix, Broad) and 10 samples requested from HETL every 2 weeks via the NS3 surveillance program.

	Total	09/26/21 - 10/02/21	10/03/21 - 10/09/21	10/10/21 - 10/16/21	10/17/21 - 10/23/21
Total number of cases sequenced	9477	242	143	131	3
Total positive tests by molecular testing	78511	N/A	N/A	N/A	N/A
Total positive tests	115665	4279	3473	2784	3242
Percent of positives sequenced (molecular)	12.07%	-	-	-	-
Percent of positives sequenced (total)	8.19%	5.66%	4.12%	4.71%	0.09%

Table 4: Total proportion of positive tests sequenced.

Supplemental Table 1: VOC/VOI proportion and total counts by county. Sequences obtained through GISAID (CDC, HETL, Other) are not included in the by-county breakdown.

AY.* does not include A.3.*, A.4, A.25 and A.26 which are provided separately.

Variant	County	Cumulative % (total count)	July 2021	August 2021	Sept 2021	Oct 2021
P.1*	ANDROSCOGGIN	1.6% (13)	3.8% (1)	0% (0)	0% (0)	0% (0)
P.1*	AROOSTOOK	10.1% (32)	0% (0)	5.0% (1)	8.2% (6)	10.0% (1)
P.1*	CUMBERLAND	1.8% (21)	5.7% (2)	1.4% (1)	0.9% (1)	0% (0)
P.1*	FRANKLIN	0.8% (1)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	HANCOCK	2.6% (5)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	KENNEBEC	1.7% (9)	0% (0)	2.9% (1)	0% (0)	0% (0)
P.1*	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	LINCOLN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	OXFORD	1.4% (4)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	PENOBCOT	2.2% (25)	0% (0)	4.5% (2)	0.3% (1)	0% (0)
P.1*	SAGADAHOC	1.4% (1)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	SOMERSET/PISCATAQUIS	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	WALDO	1.5% (4)	33.3% (2)	0% (0)	0.9% (1)	0% (0)
P.1*	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.1*	YORK	1.6% (14)	3.5% (2)	0% (0)	0.8% (1)	0% (0)
P.1*	Total (w/ county information)	1.9% (129)	2.4% (7)	1.1% (5)	0.9% (10)	0.2% (1)
P.1*	Total	1.8% (167)	4.0% (15)	1.0% (5)	0.7% (11)	0.1% (1)
B.1.351	ANDROSCOGGIN	0.2% (2)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	AROOSTOOK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	CUMBERLAND	0.1% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	FRANKLIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	HANCOCK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	KENNEBEC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	LINCOLN	1.3% (2)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	OXFORD	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	PENOBCOT	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	SOMERSET/PISCATAQUIS	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	WALDO	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	YORK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	Total (w/ county information)	0.1% (5)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.351	Total	0.1% (8)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.1.7	ANDROSCOGGIN	16.3% (135)	19.2% (5)	0% (0)	0% (0)	0% (0)
B.1.1.7	AROOSTOOK	9.1% (29)	16.7% (2)	5.0% (1)	1.4% (1)	0% (0)
B.1.1.7	CUMBERLAND	14.4% (165)	17.1% (6)	1.4% (1)	0% (0)	0% (0)
B.1.1.7	FRANKLIN	15.2% (20)	55.6% (5)	9.1% (1)	0% (0)	0% (0)
B.1.1.7	HANCOCK	8.7% (17)	50.0% (1)	0% (0)	0% (0)	0% (0)
B.1.1.7	KENNEBEC	11.5% (62)	44.0% (11)	0% (0)	0% (0)	0% (0)
B.1.1.7	KNOX	8.3% (12)	60.0% (3)	0% (0)	0% (0)	0% (0)
B.1.1.7	LINCOLN	25.2% (40)	33.3% (1)	0% (0)	0% (0)	0% (0)
B.1.1.7	OXFORD	17.3% (51)	46.7% (7)	11.1% (2)	0% (0)	0% (0)
B.1.1.7	PENOBCOT	12.4% (141)	30.0% (18)	0% (0)	0.6% (2)	0% (0)
B.1.1.7	SAGADAHOC	19.2% (14)	33.3% (1)	0% (0)	0% (0)	0% (0)
B.1.1.7	SOMERSET/PISCATAQUIS	13.5% (72)	10.7% (3)	5.6% (1)	1.0% (1)	0% (0)
B.1.1.7	WALDO	5.4% (14)	33.3% (2)	0% (0)	0% (0)	0% (0)
B.1.1.7	WASHINGTON	6.6% (8)	20.0% (2)	0% (0)	3.3% (1)	0% (0)
B.1.1.7	YORK	11.7% (102)	19.3% (11)	0.9% (1)	0.8% (1)	0% (0)
B.1.1.7	Total (w/ county information)	13.1% (882)	26.4% (78)	1.6% (7)	0.5% (6)	0% (0)
B.1.1.7	Total	12.3% (1170)	25.8% (96)	1.4% (7)	0.6% (9)	0% (0)

Supplemental Table 1 continued:

Variant	County	Cumulative % (total count)	July 2021	August 2021	Sept 2021	Oct 2021
Q.*	ANDROSCOGGIN	1.1% (9)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	AROOSTOOK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	CUMBERLAND	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	FRANKLIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	HANCOCK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	KENNEBEC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	LINCOLN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	OXFORD	0.3% (1)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	PENOBCOT	0.1% (1)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	SOMERSET/PISCATAQUIS	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	WALDO	0.8% (2)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	YORK	0.2% (2)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	Total (w/ county information)	0.2% (15)	0% (0)	0% (0)	0% (0)	0% (0)
Q.*	Total	0.2% (19)	0.3% (1)	0% (0)	0% (0)	0% (0)
B.1.429	ANDROSCOGGIN	1.3% (11)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	AROOSTOOK	3.8% (12)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	CUMBERLAND	3.5% (40)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	FRANKLIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	HANCOCK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	KENNEBEC	1.3% (7)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	LINCOLN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	OXFORD	1.4% (4)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	PENOBCOT	1.9% (22)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	SAGADAHOC	1.4% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	SOMERSET/PISCATAQUIS	0.2% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	WALDO	0.4% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	WASHINGTON	0.8% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	YORK	1.5% (13)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	Total (w/ county information)	1.7% (113)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.429	Total	1.6% (148)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	ANDROSCOGGIN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	AROOSTOOK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	CUMBERLAND	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	FRANKLIN	2.3% (3)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	HANCOCK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	KENNEBEC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	LINCOLN	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	OXFORD	1.4% (4)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	PENOBCOT	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	SOMERSET/PISCATAQUIS	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	WALDO	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	YORK	0.1% (1)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	Total (w/ county information)	0.1% (8)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.525	Total	0.1% (8)	0% (0)	0% (0)	0% (0)	0% (0)

Supplemental Table 1 continued:

Variant	County	Cumulative % (total count)	July 2021	August 2021	Sept 2021	Oct 2021
B.1.526	ANDROSCOGGIN	18.8% (156)	23.1% (6)	0% (0)	2.6% (1)	0% (0)
B.1.526	AROOSTOOK	2.5% (8)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.526	CUMBERLAND	10.1% (116)	37.1% (13)	1.4% (1)	1.8% (2)	0% (0)
B.1.526	FRANKLIN	9.1% (12)	33.3% (3)	0% (0)	0% (0)	0% (0)
B.1.526	HANCOCK	10.8% (21)	50.0% (1)	9.1% (1)	0% (0)	0% (0)
B.1.526	KENNEBEC	17.9% (96)	36.0% (9)	5.9% (2)	1.7% (1)	0% (0)
B.1.526	KNOX	15.2% (22)	40.0% (2)	0% (0)	0% (0)	0% (0)
B.1.526	LINCOLN	3.8% (6)	0% (0)	0% (0)	0% (0)	0% (0)
B.1.526	OXFORD	11.6% (34)	13.3% (2)	22.2% (4)	0% (0)	0% (0)
B.1.526	PENOBCOT	8.0% (91)	20.0% (12)	0% (0)	1.3% (4)	0% (0)
B.1.526	SAGADAHOC	24.7% (18)	33.3% (1)	0% (0)	0% (0)	0% (0)
B.1.526	SOMERSET/PISCATAQUIS	15.2% (81)	64.3% (18)	11.1% (2)	1.9% (2)	0% (0)
B.1.526	WALDO	7.3% (19)	33.3% (2)	0% (0)	0% (0)	0% (0)
B.1.526	WASHINGTON	17.2% (21)	70.0% (7)	0% (0)	0% (0)	0% (0)
B.1.526	YORK	7.1% (62)	3.5% (2)	0% (0)	0% (0)	0% (0)
B.1.526	Total (w/ county information)	11.3% (763)	26.4% (78)	2.2% (10)	0.9% (10)	0% (0)
B.1.526	Total	10.7% (1013)	26.1% (97)	2.0% (10)	0.9% (13)	0% (0)
B.1.617.2	ANDROSCOGGIN	3.6% (30)	0% (0)	4.5% (1)	23.1% (9)	28.6% (2)
B.1.617.2	AROOSTOOK	16.7% (53)	0% (0)	50.0% (10)	49.3% (36)	50.0% (5)
B.1.617.2	CUMBERLAND	8.7% (99)	0% (0)	27.5% (19)	33.3% (37)	28.9% (11)
B.1.617.2	FRANKLIN	9.1% (12)	0% (0)	45.5% (5)	23.5% (4)	50.0% (2)
B.1.617.2	HANCOCK	14.4% (28)	0% (0)	0% (0)	39.7% (23)	66.7% (4)
B.1.617.2	KENNEBEC	7.4% (40)	0% (0)	23.5% (8)	35.0% (21)	19.4% (7)
B.1.617.2	KNOX	9.7% (14)	0% (0)	34.6% (9)	11.1% (4)	7.1% (1)
B.1.617.2	LINCOLN	22.6% (36)	0% (0)	35.7% (5)	40.4% (19)	45.0% (9)
B.1.617.2	OXFORD	6.1% (18)	0% (0)	22.2% (4)	35.3% (6)	20.0% (1)
B.1.617.2	PENOBCOT	24.2% (275)	3.3% (2)	29.5% (13)	55.2% (175)	58.2% (57)
B.1.617.2	SAGADAHOC	6.8% (5)	0% (0)	0% (0)	28.6% (2)	0% (0)
B.1.617.2	SOMERSET/PISCATAQUIS	12.2% (65)	0% (0)	16.7% (3)	28.8% (30)	20.0% (16)
B.1.617.2	WALDO	13.1% (34)	0% (0)	17.0% (8)	14.7% (16)	38.9% (7)
B.1.617.2	WASHINGTON	19.7% (24)	0% (0)	0% (0)	73.3% (22)	0% (0)
B.1.617.2	YORK	9.6% (83)	0% (0)	14.7% (16)	22.2% (28)	29.1% (25)
B.1.617.2	Total (w/ county information)	12.1% (816)	0.7% (2)	22.6% (101)	37.5% (432)	34.4% (147)
B.1.617.2	Total	14.8% (1405)	0.5% (2)	22.3% (113)	37.3% (556)	40.4% (392)
AY.3.*	ANDROSCOGGIN	2.8% (23)	0% (0)	9.1% (2)	48.7% (19)	14.3% (1)
AY.3.*	AROOSTOOK	2.5% (8)	0% (0)	0% (0)	6.8% (5)	0% (0)
AY.3.*	CUMBERLAND	2.2% (25)	0% (0)	14.5% (10)	8.1% (9)	15.8% (6)
AY.3.*	FRANKLIN	1.5% (2)	0% (0)	0% (0)	11.8% (2)	0% (0)
AY.3.*	HANCOCK	1.5% (3)	0% (0)	9.1% (1)	3.4% (2)	0% (0)
AY.3.*	KENNEBEC	4.5% (24)	0% (0)	35.3% (12)	10.0% (6)	13.9% (5)
AY.3.*	KNOX	8.3% (12)	0% (0)	23.1% (6)	8.3% (3)	21.4% (3)
AY.3.*	LINCOLN	3.1% (5)	0% (0)	7.1% (1)	2.1% (1)	0% (0)
AY.3.*	OXFORD	1.7% (5)	0% (0)	11.1% (2)	11.8% (2)	20.0% (1)
AY.3.*	PENOBCOT	3.0% (34)	0% (0)	4.5% (2)	7.6% (24)	5.1% (5)
AY.3.*	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.3.*	SOMERSET/PISCATAQUIS	2.3% (12)	0% (0)	0% (0)	1.9% (2)	5.0% (4)
AY.3.*	WALDO	3.5% (9)	0% (0)	8.5% (4)	3.7% (4)	5.6% (1)
AY.3.*	WASHINGTON	1.6% (2)	0% (0)	0% (0)	3.3% (1)	20.0% (1)
AY.3.*	YORK	5.4% (47)	0% (0)	14.7% (16)	19.8% (25)	4.7% (4)
AY.3.*	Total (w/ county information)	3.1% (211)	0% (0)	12.6% (56)	9.1% (105)	7.3% (31)
AY.3.*	Total	3.4% (318)	0% (0)	12.8% (65)	9.5% (141)	6.0% (58)

Supplemental Table 1 continued:

Variant	County	Cumulative % (total count)	July 2021	August 2021	Sept 2021	Oct 2021
AY.25	ANDROSCOGGIN	1.3% (11)	0% (0)	18.2% (4)	10.3% (4)	28.6% (2)
AY.25	AROOSTOOK	4.4% (14)	0% (0)	5.0% (1)	13.7% (10)	20.0% (2)
AY.25	CUMBERLAND	4.5% (52)	0% (0)	11.6% (8)	27.9% (31)	26.3% (10)
AY.25	FRANKLIN	4.5% (6)	0% (0)	0% (0)	23.5% (4)	50.0% (2)
AY.25	HANCOCK	10.3% (20)	0% (0)	18.2% (2)	31.0% (18)	0% (0)
AY.25	KENNEBEC	4.5% (24)	0% (0)	5.9% (2)	15.0% (9)	30.6% (11)
AY.25	KNOX	11.7% (17)	0% (0)	3.8% (1)	30.6% (11)	28.6% (4)
AY.25	LINCOLN	10.7% (17)	0% (0)	14.3% (2)	27.7% (13)	10.0% (2)
AY.25	OXFORD	4.4% (13)	0% (0)	0% (0)	11.8% (2)	20.0% (1)
AY.25	PENOBCOT	5.8% (66)	0% (0)	13.6% (6)	12.3% (39)	12.2% (12)
AY.25	SAGADAHOC	1.4% (1)	0% (0)	0% (0)	14.3% (1)	0% (0)
AY.25	SOMERSET/PISCATAQUIS	4.7% (25)	0% (0)	0% (0)	12.5% (13)	13.8% (11)
AY.25	WALDO	40.9% (106)	0% (0)	51.1% (24)	68.8% (75)	38.9% (7)
AY.25	WASHINGTON	7.4% (9)	0% (0)	0% (0)	10.0% (3)	80.0% (4)
AY.25	YORK	11.7% (102)	0% (0)	26.6% (29)	23.8% (30)	32.6% (28)
AY.25	Total (w/ county information)	7.2% (483)	0% (0)	17.7% (79)	22.8% (263)	22.5% (96)
AY.25	Total	8.2% (778)	0% (0)	18.0% (91)	22.6% (336)	20.0% (194)
AY.44	ANDROSCOGGIN	0.8% (7)	0% (0)	9.1% (2)	7.7% (3)	14.3% (1)
AY.44	AROOSTOOK	2.5% (8)	0% (0)	5.0% (1)	8.2% (6)	0% (0)
AY.44	CUMBERLAND	3.1% (36)	0% (0)	11.6% (8)	14.4% (16)	23.7% (9)
AY.44	FRANKLIN	3.0% (4)	0% (0)	9.1% (1)	0% (0)	0% (0)
AY.44	HANCOCK	2.6% (5)	0% (0)	9.1% (1)	6.9% (4)	0% (0)
AY.44	KENNEBEC	4.8% (26)	0% (0)	17.6% (6)	20.0% (12)	22.2% (8)
AY.44	KNOX	13.8% (20)	0% (0)	11.5% (3)	38.9% (14)	14.3% (2)
AY.44	LINCOLN	3.1% (5)	0% (0)	21.4% (3)	2.1% (1)	5.0% (1)
AY.44	OXFORD	2.0% (6)	0% (0)	5.6% (1)	29.4% (5)	0% (0)
AY.44	PENOBCOT	3.2% (36)	0% (0)	18.2% (8)	7.6% (24)	3.1% (3)
AY.44	SAGADAHOC	5.5% (4)	0% (0)	0% (0)	42.9% (3)	0% (0)
AY.44	SOMERSET/PISCATAQUIS	10.3% (55)	0% (0)	16.7% (3)	17.3% (18)	32.5% (26)
AY.44	WALDO	2.7% (7)	0% (0)	2.1% (1)	5.5% (6)	0% (0)
AY.44	WASHINGTON	9.0% (11)	0% (0)	33.3% (1)	0% (0)	0% (0)
AY.44	YORK	4.7% (41)	3.5% (2)	11.0% (12)	11.9% (15)	12.8% (11)
AY.44	Total (w/ county information)	4.0% (271)	0.7% (2)	11.4% (51)	11.0% (127)	14.3% (61)
AY.44	Total	4.4% (417)	0.5% (2)	10.9% (55)	10.7% (160)	11.2% (109)
AY.47	ANDROSCOGGIN	0.2% (2)	0% (0)	0% (0)	2.6% (1)	0% (0)
AY.47	AROOSTOOK	0.9% (3)	0% (0)	0% (0)	2.7% (2)	0% (0)
AY.47	CUMBERLAND	0.3% (3)	0% (0)	0% (0)	1.8% (2)	2.6% (1)
AY.47	FRANKLIN	2.3% (3)	0% (0)	9.1% (1)	11.8% (2)	0% (0)
AY.47	HANCOCK	2.6% (5)	0% (0)	0% (0)	5.2% (3)	33.3% (2)
AY.47	KENNEBEC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.47	KNOX	1.4% (2)	0% (0)	0% (0)	2.8% (1)	7.1% (1)
AY.47	LINCOLN	1.9% (3)	0% (0)	0% (0)	6.4% (3)	0% (0)
AY.47	OXFORD	1.0% (3)	0% (0)	11.1% (2)	5.9% (1)	0% (0)
AY.47	PENOBCOT	1.5% (17)	0% (0)	0% (0)	3.8% (12)	5.1% (5)
AY.47	SAGADAHOC	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
AY.47	SOMERSET/PISCATAQUIS	3.9% (21)	0% (0)	0% (0)	7.7% (8)	12.5% (10)
AY.47	WALDO	1.9% (5)	0% (0)	0% (0)	1.8% (2)	5.6% (1)
AY.47	WASHINGTON	1.6% (2)	0% (0)	33.3% (1)	3.3% (1)	0% (0)
AY.47	YORK	2.1% (18)	0% (0)	4.6% (5)	3.2% (4)	8.1% (7)
AY.47	Total (w/ county information)	1.3% (87)	0% (0)	2.0% (9)	3.6% (42)	6.3% (27)
AY.47	Total	1.7% (163)	0% (0)	2.2% (11)	3.6% (53)	5.5% (53)

Supplemental Table 1 continued:

Variant	County	Cumulative % (total count)	July 2021	August 2021	Sept 2021	Oct 2021
AY.*	ANDROSCOGGIN	0.8% (7)	7.7% (2)	9.1% (2)	5.1% (2)	14.3% (1)
AY.*	AROOSTOOK	7.5% (24)	0% (0)	25.0% (5)	8.2% (6)	20.0% (2)
AY.*	CUMBERLAND	1.6% (18)	11.4% (4)	10.1% (7)	3.6% (4)	0% (0)
AY.*	FRANKLIN	3.8% (5)	0% (0)	18.2% (2)	17.6% (3)	0% (0)
AY.*	HANCOCK	6.2% (12)	0% (0)	54.5% (6)	8.6% (5)	0% (0)
AY.*	KENNEBEC	3.0% (16)	0% (0)	2.9% (1)	16.7% (10)	13.9% (5)
AY.*	KNOX	6.2% (9)	0% (0)	11.5% (3)	5.6% (2)	14.3% (2)
AY.*	LINCOLN	9.4% (15)	0% (0)	21.4% (3)	19.1% (9)	10.0% (2)
AY.*	OXFORD	1.7% (5)	0% (0)	11.1% (2)	5.9% (1)	40.0% (2)
AY.*	PENOBCOT	3.0% (34)	0% (0)	20.5% (9)	5.7% (18)	7.1% (7)
AY.*	SAGADAHOC	2.7% (2)	0% (0)	0% (0)	14.3% (1)	0% (0)
AY.*	SOMERSET/PISCATAQUIS	7.5% (40)	0% (0)	38.9% (7)	22.1% (23)	10.0% (8)
AY.*	WALDO	4.6% (12)	0% (0)	17.0% (8)	1.8% (2)	11.1% (2)
AY.*	WASHINGTON	0.8% (1)	0% (0)	33.3% (1)	0% (0)	0% (0)
AY.*	YORK	4.5% (39)	0% (0)	18.3% (20)	7.1% (9)	8.1% (7)
AY.*	Total (w/ county information)	3.5% (239)	2.0% (6)	17.0% (76)	8.3% (95)	8.9% (38)
AY.*	Total	4.4% (416)	2.2% (8)	17.0% (86)	8.9% (132)	12.4% (120)
P.2	ANDROSCOGGIN	0.5% (4)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	AROOSTOOK	1.6% (5)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	CUMBERLAND	0.4% (5)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	FRANKLIN	0.8% (1)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	HANCOCK	9.7% (19)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	KENNEBEC	0.4% (2)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	KNOX	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	LINCOLN	2.5% (4)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	OXFORD	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	PENOBCOT	1.5% (17)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	SAGADAHOC	2.7% (2)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	SOMERSET/PISCATAQUIS	5.1% (27)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	WALDO	1.2% (3)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	WASHINGTON	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	YORK	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	Total (w/ county information)	1.3% (89)	0% (0)	0% (0)	0% (0)	0% (0)
P.2	Total	1.2% (112)	0% (0)	0% (0)	0% (0)	0% (0)

Supplemental Table 1 continued:

Variant	County	Cumulative % (total count)	July 2021	August 2021	Sept 2021	Oct 2021
Delta	ANDROSCOGGIN	49.5% (410)	53.8% (14)	50.0% (11)	100.0% (39)	100.0% (7)
	AROOSTOOK	61.6% (196)	16.7% (2)	95.0% (19)	98.6% (72)	100.0% (10)
	CUMBERLAND	50.8% (581)	71.4% (25)	79.7% (55)	91.9% (102)	97.4% (37)
	FRANKLIN	52.3% (69)	88.9% (8)	90.9% (10)	88.2% (15)	100.0% (4)
	HANCOCK	69.2% (135)	100.0% (2)	100.0% (11)	94.8% (55)	100.0% (6)
	KENNEBEC	57.0% (306)	80.0% (20)	94.1% (32)	98.3% (59)	100.0% (36)
	KNOX	74.5% (108)	100.0% (5)	84.6% (22)	97.2% (35)	92.9% (13)
	LINCOLN	83.6% (133)	33.3% (1)	100.0% (14)	97.9% (46)	70.0% (14)
	OXFORD	50.3% (148)	60.0% (9)	94.4% (17)	100.0% (17)	100.0% (5)
	PENOBCOT	66.9% (759)	53.3% (32)	90.9% (40)	94.3% (299)	90.8% (89)
	SAGADAHOC	65.8% (48)	66.7% (2)	0% (0)	100.0% (7)	0% (0)
	SOMERSET/PISCATAQUIS	75.0% (399)	75.0% (21)	88.9% (16)	93.3% (97)	93.8% (75)
	WALDO	83.4% (216)	100.0% (6)	95.7% (45)	97.2% (106)	100.0% (18)
	WASHINGTON	64.8% (79)	90.0% (9)	100.0% (3)	93.3% (28)	100.0% (5)
	YORK	60.3% (524)	29.8% (17)	90.8% (99)	89.7% (113)	95.3% (82)
Total VOI/VOC Sequenced	Total (w/ county information)	61.0% (4111)	58.4% (173)	88.3% (394)	94.7% (1090)	93.9% (401)
Total VOI/VOC Sequenced	Total	64.8% (6142)	59.4% (221)	87.5% (443)	94.8% (1411)	95.5% (927)
Alpha	ANDROSCOGGIN	828	26	22	39	7
	AROOSTOOK	318	12	20	73	10
	CUMBERLAND	1144	35	69	111	38
	FRANKLIN	132	9	11	17	4
	HANCOCK	195	2	11	58	6
	KENNEBEC	537	25	34	60	36
	KNOX	145	5	26	36	14
	LINCOLN	159	3	14	47	20
	OXFORD	294	15	18	17	5
	PENOBCOT	1135	60	44	317	98
	SAGADAHOC	73	3	0	7	0
	SOMERSET/PISCATAQUIS	532	28	18	104	80
	WALDO	259	6	47	109	18
	WASHINGTON	122	10	3	30	5
	YORK	869	57	109	126	86
Total Cases Sequenced	Total (w/ county information)	6742	296	446	1151	427
Total Cases Sequenced	Total	9477	372	506	1489	971